

REMARKS

Status of Claims

Claims 1-6 and 12-19 are pending in this application, of which claims 5-6 and 12-14 have been withdrawn.

Claims 1 and 18 have been amended to correct informalities in the claim language and to more clearly define the claimed subject matter. Support for the amendments is found, for example, at FIG. 2A and the corresponding description thereof in the specification. No new matter has been entered.

Rejection under 35 U.S.C. § 103(a)

Claims 1, 2, 15 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Teshima et al. (US 2003/0132530) in view of Litwin (US 6,507,047). Claims 1-4, 16, 18 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mamitsu et al. (US 6,703,707) in view of Litwin. Claim 17 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over Teshima et al. in view of Litwin, and further in view of Wu et al. (US 6,590,281). Applicants respectfully traverse these rejections for at least the following reasons.

Applicants respectfully submit that, at a minimum, none of the cited references discloses or even suggests the semiconductor apparatus comprising a second base material made of a metal material and disposed on a part of the upper surface of the semiconductor chip, a part of the second base material being extruded outside the encapsulating material and working as a second external connection terminal, as recited by amended claim 1. Further, none of the cited references discloses or even suggests a second intermediate member made of a material having lower heat conductivity than the first intermediate member provided under the lower surface of

the semiconductor chip and between the first base material and the semiconductor chip, as recited by amended claim 1.

In rejecting independent claim 1, the Examiner asserts that the electrode 7 in FIG. 3 of Teshima corresponds to the claimed second base material. Applicants, however, submit that the electrode 7 of Teshima is not disposed on the upper surface of the semiconductor chip 1. Further, the Examiner asserts that the resin film 15 of Teshima corresponds to the claimed second intermediate member. However, the resin film 15 of Teshima is disposed over the semiconductor chip 1, but is not disposed under the lower surface of the semiconductor chip 1 and between the alleged first base material 5 and the semiconductor chip 1 (see, FIG. 3 of Teshima).

The Examiner also asserts that the electrode 5 in FIG. 8A of Mamitsu corresponds to the claimed second base material. Applicants, however, submit that the electrode 5 of Mamitsu is not disposed on the upper surface of the semiconductor chip 1a. Further, the Examiner asserts that the RAB resin 18 of Mamitsu corresponds to the claimed second intermediate member. However, the RAB resin 18 of Mamitsu is disposed over the semiconductor chip 1a, but is not disposed under the lower surface of the semiconductor chip 1a and between the alleged first base material 3 and the semiconductor chip 1a (see, FIG. 8A of Mamitsu).

As such, it is clear that, at a minimum, neither Teshima nor Mamitsu discloses the above discussed elements of amended claim 1 regarding the second base material and the second intermediate member. Further, Applicants submit that since Litwin is cited to cure the deficiencies of Teshima or Mamitsu regarding a power transistor, Litwin does not cure the deficiencies of Teshima or Mamitsu regarding the second base material and the second intermediate member. Nor does Wu cure the deficiencies of Teshima, Mamitsu and Litwin.

Accordingly, Applicants respectfully submit that none of the cited references, taken alone or in any combination thereof, renders claim 1 or any claim dependent thereon obvious. Thus, Applicants respectfully request that the Examiner withdraw the rejections of claims 1-4 and 15-19 under 35 U.S.C. § 103(a).

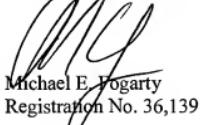
CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Michael E. Fogarty
Registration No. 36,139

Please recognize our Customer No. 53080
as our correspondence address.

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 MEF:TS:MaM
Facsimile: 202.756.8087
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